What is claimed is:

1. A method of forging a piston comprising:

die forging a blank of steel in a first axial direction longitudinally of the piston to produce a one piece forged structure including at least a portion of a piston head, a pair of laterally spaced pin bosses extending downwardly from the piston head portion having a common pin bore axis transverse to said first axial direction, and a piston skirt having a pair of laterally opposed skirt portions spaced from the pin bosses and strut portions extending between and joining said skirt portions to the pin bosses as a one piece structure; and

further die forging the blank in at least a second axial direction transverse to the first axial direction to produce a forged recess in each of the strut portions of the piston skirt.

2. The method of claim 1 wherein the die forging in the second axial direction is in line with the pin bore axis.

3. The method of claim 2 including forming outer surfaces of the pin bosses and forging the strut portions in the second axial direction such that the recesses extend laterally inwardly of the outer surfaces of the pin boss portions.

4. The method of claim 1 wherein the skirt is formed with a lower edge longitudinally adjacent a lower edge of the pin bosses.

5. The method of claim 1 including forming pin bores in the pin bosses about the pin bore axis the pin bores having an upper apex.

6. The method of claim 5 wherein the recesses forged in the strut portions are formed so as to extend below the upper apex of the pin bores.

7. The method of claim 1 wherein the recesses forged in the web portions are formed to extend above and below the pin bore axis.

8. The method of claim 1 wherein the recesses forged in the strut portions extend laterally inwardly of laterally opposed edges of the pin bores at a location above the pin bore axis.

9. The method of claim 8 wherein the recesses are formed to extend laterally across the pin bosses above the pin bores.

10. The method of claim 1 wherein the strut portions have lower edges and the recesses are each longitudinally undercut such that a lower edge of the recesses are spaced at least in part from the lower edge of the strut portions.

11. The method of claim 1 wherein a portion of the recesses are formed to extend into the skirt portions.

12. The method of claim 11 wherein the skirt portions are formed with a lower edge and the extend recess portions are formed so as to be spaced from the lower edge of the skirt portions.

13. The method of claim 1 wherein the skirt is joined directly to the piston head as a one piece structure.

14. The method of claim 1 wherein the head is formed with at least one closed oil gallery.

15. The method of claim 14 including forming the piston head in at least two parts and joining them together to define a closed oil gallery within the head.

16. The method of claim 15 including forging at least a portion of the gallery in the first axial forging operation.

17. The method of claim 15 including joining the piston head parts by friction welding.

18. The method of claim 15 including forging at least one oil drain access opening.

19. The method of claim 18 wherein the access opening is formed to open to an oil ring groove.

20. The method of claim 1 including forging the skirt portions with an inner wall that is tapered in the longitudinal direction such that the skirt portions are thicker at an upper region thereof adjacent the head and are narrow adjacent a lower end of the skirt portions.

21. The method of claim 1 including forming the piston to include an upper crown part and a lower crown part, each part having a circumferentially extending inner wall and a circumferentially extending outer wall spaced radially outwardly from said inner wall thereof, the outer wall of the upper part being defined by a ring belt and the outer wall of the lower part being defined by the piston skirt.

22. The method of claim 21 including forming the inner walls with matable joining surfaces and friction welding the inner walls together across the joining surfaces to unite the upper and lower crown parts.

23. The method of claim 22 including forming the outer walls with matable joining surfaces and friction welding the outer walls together across the

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joining surfaces thereof simultaneously with the friction welding of the inner walls to unite the piston skirt to the ring belt.

24. The method of claim 23 including forging a circumferential recess between the inner and outer walls of the upper and lower crown parts so as to form a closed gallery upon friction welding the crown parts together.

25. The method of claim 23 including forming at least one ring groove in the outer wall of the lower crown part below the friction weld joint of the outer walls.

26. The method of claim 23 including forming the joining faces of the inner and outer walls such that the friction weld joints of the inner and outer walls lie in different planes.

27. The method of claim 23 including forming the lower crown part with an inner gallery floor spanning said inner wall thereof and an outer circumferentially extending gallery floor between the inner and outer walls so as to form inner and outer closed oil galleries between said crown parts upon friction welding the crown parts together.

28. The method of claim 24 including forging at least one oil drain access hole in the lower crown part.

29. The method of claim 1 including forming in the forging process at least a lower crown part of the piston having the piston skirt and pin bosses formed as one piece, and including forming the pin bosses with inner faces separated by a lateral space during the first axial forging step and forging in the same step a cavity located above the pin bore axis in open communication with the lateral space

which is undercut in relation to the inner faces of the pin bores in the longitudinal direction away from the bottom of the pin bosses such that the cavity extends laterally outwardly of the inner pin boss faces in the direction of the pin bore axis.

30. The method of claim 29 including forming an associated upper crown part and friction welding the upper and lower crown parts together across a friction weld joint.

31. The method of claim 30 wherein the upper and lower crown parts are formed such that the friction weld joint passes through the cavity.

32. The method of claim 31 wherein the upper and lower crown parts are formed such that the cavity extends above and below the friction weld joint.

33. The method of claim 30 including forming a closed oil gallery between the crown parts upon joining the crown parts together while surrounds the cavity and is separated therefrom by adjoined inner walls of the crown parts.

34. The method of claim 29 including forging the inner faces of the pin bosses at an angle to provide a variable width of the pin bosses increasing in the longitudinal direction away from the lower end of the pin bosses.

35. A forged piston comprising:

a piston head having a combustion bowl and a ring belt with a plurality of ring grooves formed therein;

a pair of pin bosses extending downwardly from said piston head having pin bores formed therein aligned along a common pin bore axis transverse to a longitudinal axis of the piston head;

a piston skirt forged as one piece with said pin bosses including a pair of opposed skirt portions spaced from said pin bosses and intervening strut portions extending between and uniting said skirt portions to said pin bosses, said strut portions presenting outer surfaces facing in opposite directions along said pin bore axis and having lower edges; and

forged recesses formed in said outer surfaces of said strut portions.

36. The piston of claim 35 wherein said pin bores have laterally opposed edges and said recesses extend laterally inwardly of said pin bore edges at a location above said pin bore axis.

37. The piston of claim 36 wherein said recesses extend laterally across said pin bosses above said pin bores.

38. The piston of claim 35 wherein said pin bosses have outer faces and said recesses extend inwardly of said pin bore faces.

39. The piston of claim 35 wherein strut portions have lower edges and said recesses each have a longitudinally undercut lower edge that is spaced at least in part from said associated lower edge of said strut portion.

40. The piston of claim 35 wherein a portion of said recess extends into said skirt portions of said skirt.

41. The piston of claim 40 wherein said skirt portions have a lower edge and said extended portion of said recess is spaced from said lower edged of said skirt portions.

42. The piston of claim 35 wherein said recesses are symmetrical across a longitudinal plane containing both said longitudinal axis of said piston and said pin bore axis.

43. The piston of claim 42 wherein each of said recesses extend across said longitudinal plane above said pin bores.

44. The piston of claim 35 wherein said piston head includes at least one oil cooling gallery.

45. The piston of claim 44 wherein said piston head includes at least one friction welded joint.

46. The piston of claim 45 wherein said gallery has a closed bottom end.

47. The piston of claim 35 wherein said piston skirt has an upper end and said ring belt has a lower end.

48. The piston of claim 47 wherein said upper end of said piston skirt is coupled to said lower end of said ring belt to define at least one closed oil cooling gallery within said piston head.

49. The piston of claim 47 wherein said piston skirt is friction welded to said ring belt.

50. The piston of claim 35 wherein said piston is fabricated of steel.

51. The piston of claim 35 wherein said piston head includes an upper crown having said ring belt defining an outer circumferentially continuous wall having a lower joining surface and a circumferentially continuous inner wall spaced radially inwardly of said ring belt and having a lower joining surface, and a

lower crown having said piston skirt defining an outer circumferentially continuous wall having an upper joining surface and a circumferentially continuous inner wall spaced radially inwardly of said piston skirt and having an upper joining surface, and whereby said upper and lower joining surfaces of said inner and outer walls are joined by friction welding to define at least one closed oil cooling gallery.

52. The piston of claim 51 wherein said piston head includes a radially inner and radially outer cooling gallery separated by said inner wall.

53. The piston of claim 51 wherein said piston head includes at least one oil drain opening.

54. The piston of claim 51 wherein said lower crown includes a circumferential recess between said inner and outer wall extending below said upper joining surfaces of said inner and outer walls to define a lower portion of said cooling gallery residing below said friction weld joint and extending into said lower crown.

55. The piston of claim 54 wherein said outer wall of said lower crown is formed with at least one of said ring grooves residing below said friction weld joint of said outer walls of said upper and lower crowns.

56. The piston of claim 54 wherein said circumferential recess extends into said skirt portions of said lower crown.

57. The piston of claim 51 wherein said joining surfaces of said outer walls are spaced above said joining surface of said inner walls in a different plane.

58. The piston of claim 35 wherein said pin bosses include inner faces separated by a lateral space and a forged cavity located above said pin bores in open communication with said space and being undercut in said pin bosses so as to extend laterally outwardly of said inner faces of said pin bosses in the direction of said pin boss axis.

59. The piston of claim 58 wherein said piston head includes an upper crown and a lower crown part having adjoined inner walls thereof with an inner surface spaced laterally outwardly of said inner faces of said pin bosses and defining a longitudinally extending inner surface of said cavity, said inner walls having a joint passing through said cavity.

60. The piston of claim 58 wherein said joint comprises a friction weld joint.

61. The piston of claim 58 wherein said inner surface of said inner walls extend vertically upwardly or at a positive outward draft angle from said inner faces to said joint.

62. The piston of claim 58 wherein said cavity extends into said upper crown above said joint in said undercut relation to said inner faces of said pin bosses.

63. The piston of claim 58 wherein head includes a closed oil gallery surrounding said cavity and separated therefrom by said inner walls.

64. The piston of claim 58 wherein said inner faces are set at an angle such that said pin bosses have a varying width longitudinally of said piston

between a lower end of said pin bosses and an upper region above said pin bosses adjacent said cavity.

65. The piston of claim 64 wherein said width of said pin bosses increases continuously across said pin bores.

66. The piston of claim 64 wherein said space between said inner faces decreases in the longitudinal direction from said lower end of said pin bosses toward said cavity.

67. The piston of claim 35 wherein said piston skirt portions are tapered so as to increase in thickness in the longitudinal direction of said piston from a lower end of said skirt portions toward said piston head as measured in a longitudinal plane perpendicular to said pin bore axis.

68. The piston of claim 67 wherein said piston skirt portion includes an outer wall and an inner wall, said inner wall being set at an angle with respect to said outer wall to provide a continuously increasing said thickness in the longitudinal direction away from said lower end of said skirt portions.

69. The piston of claim 68 wherein said angle is set at about 2° or greater.

70. The piston of claim 68 wherein said angle is set at less than 3°.

71. A mono steel piston comprising:

an upper crown portion fabricated of steel having a head portion formed with at least one circumferentially extending mating surfaces; and

a lower crown portion forged from a single piece of steel including an upper head portion having at least one circumferentially extending mating

surface, a pair of pin boss portions extending downwardly from said upper head portion in laterally spaced relation to one another; and an integral skirt formed as a single forged piece with said pin boss portions including a pair of opposed skirt portions spaced from said pin boss portions and strut portions extending between and intermediate said skirt portions and said pin boss portions; said mating surface of said lower crown portion being friction welded to said mating surface of said upper crown portion.

72. The piston of claim 71 wherein said piston skirt portions include an upper free edge spaced and discoupled from said upper crown portion.

73. The piston of claim 71 wherein said upper crown portion includes a pair of said circumferentially continuous joining surfaces spaced radially from one another, and said lower crown portion includes a corresponding pair of said circumferentially continuous joining surfaces friction welded to said joining surface of said upper crown portion to define at least one closed oil gallery therebetween.

74. The piston of claim 73 wherein said friction welded crown portions include at least two closed oil galleries.

75. The piston of claim 73 wherein said piston skirt portions include an upper free edge spaced and discoupled from said upper crown portion.

76. The piston of claim 71 wherein said lower crown portion is multi-axially forged to include forged recesses in the piston skirt in one or more areas inaccessible by forging in the longitudinal direction of the piston.

77. A method of making a piston comprising:

fabricating an upper crown portion of steel having a head portion with at least one circumferentially continuous joining surface; and

forging a lower crown portion from a single piece of steel including an upper head portion having at least one corresponding circumferentially continuous joining surface, a pair of pin boss portions extending downwardly from the upper head portion, and a piston skirt forged as one piece with the pin boss portions, and friction welding the joining surfaces of the upper and lower crown portions to unite the upper and lower crown portions.